CLAIMS

What is claimed is:

1.   A method comprising:

receiving a request to take an action with respect to a distributed electronic document;

identifying, in response to the request, information associated with the distributed electronic document, the associated information indicating a second electronic document different from the distributed electronic document; and

imparting information concerning the second electronic document to force the action to be taken with respect to the second electronic document.

2.   The method of claim 1, wherein receiving the request comprises receiving, at a server, the request from a client to take the action with respect to the distributed electronic document, wherein the distributed electronic document is retained locally at the client, identifying the associated information comprises identifying associated information retained at the server, and imparting the second document information comprises relating the second document information from the server to the client.

3.   The method of claim 2, wherein relating the second document information comprises sending the second document information to the client to allow the client to obtain the second document.

4.   The method of claim 2, wherein the distributed and second documents comprise different language versions of a document.

5.   The method of claim 2, wherein the distributed and second documents comprise different sequential versions of a document.

6.   The method of claim 2, wherein relating the second document information comprises:

obtaining the second electronic document; and

sending the second electronic document to the client.

7.   The method of claim 6, wherein the second electronic document comprises a later version of the distributed electronic document, and the associated information comprises document-permissions information specifying that the action is not permitted with respect to the distributed electronic document at the client.

8.   The method of claim 7, wherein the document-permissions information specifies access permissions at a level of granularity smaller than the distributed electronic document.

9.   The method of claim 6, wherein the associated information comprises user-dependent association information indicating the second electronic document, and obtaining the second electronic document comprises identifying the second electronic document based on the user-dependent association information and an identified user at the client.

10.   The method of claim 9, wherein obtaining the second electronic document further comprises generating at least a portion of the second electronic document based on the identified user.

11.   The method of claim 6, wherein the distributed and second documents comprise different format versions of a document.

12.   The method of claim 6, wherein the distributed electronic document comprises a software program, the second electronic document comprises a later version of the software program, and the action comprises running the software program.

13.   The method of claim 2, further comprising:

accessing the distributed electronic document at the client;

identifying an address of the server and a document identifier in the distributed electronic document;

sending the document identifier and the requested action to the server using the address; and

replacing the distributed document, at the client, with the second document.

14.   The method of claim 13, wherein replacing the distributed document comprises performing the action with respect to the second document.

15.   The method of claim 14, wherein the second document includes the address of the server and a second document identifier, and replacing the distributed document further comprises writing over the distributed document with the second document in a storage device.

16.   A method comprising:

opening a locally retained distributed document;

contacting a document control server identified from the distributed document; and

forcing use of a second document in place of the distributed document, with respect to at least one document action, based on information received from the document control server.

17.   The method of claim 16, further comprising obtaining the second document based on the received information.

18.   The method of claim 16, wherein the received information comprises the second document.

19.   The method of claim 16, wherein the second document comprises a later version of the distributed document, and forcing use comprises transparently closing the distributed document and opening the second document.

20.   The method of claim 19, wherein forcing use further comprises transparently overwriting the distributed document with the second document.

21.   The method of claim 16, wherein the received information comprises document-permissions information specifying permissions relating the second document with the distributed document.

22.   The method of claim 16, wherein the distributed document comprises a software program, the second document comprises a later version of the software program, and the at least one document action comprises running the software program.

23.   A software product tangibly embodied in a machine-readable medium, the software product comprising instructions operable to cause one or more data processing apparatus to perform operations comprising:

receiving a request to take an action with respect to a distributed electronic document;

identifying, in response to the request, information associated with the distributed electronic document, the associated information indicating a second electronic document different from and associated with the distributed electronic document; and

imparting information concerning the second electronic document to force the action to be taken with respect to the second electronic document.

24.   The software product of claim 23, wherein receiving the request comprises receiving, at a server, the request from a client to take the action with respect to the distributed electronic document, wherein the distributed electronic document is retained locally at the client, identifying the associated information comprises identifying associated information retained at the server, and imparting the second document information comprises relating the second document information from the server to the client.

25.   The software product of claim 24, wherein relating the second document information comprises sending the second document information to the client to allow the client to obtain the second document.

26.   The software product of claim 24, wherein relating the second document information comprises:
     obtaining the second electronic document; and
     sending the second electronic document to the client.

27.   The software product of claim 26, wherein the second electronic document comprises a later version of the distributed electronic document, and the associated information comprises document-permissions information specifying that the action is not permitted with respect to the distributed electronic document at the client.

28.   The software product of claim 26, wherein the associated information comprises user-dependent association information indicating the second electronic document, and obtaining the second electronic document comprises identifying the second electronic document based on the user-dependent association information and an identified user at the client.

29.   The software product of claim 28, wherein obtaining the second electronic document further comprises generating at least a portion of the second electronic document based on the identified user.

30.   The software product of claim 26, wherein the distributed electronic document comprises a software program, the second electronic document comprises a later version of the software program, and the action comprises running the software program.

31.   A software product tangibly embodied in a machine-readable medium, the software product comprising instructions operable to cause one or more data processing apparatus to perform operations comprising:

opening a locally retained distributed document;

contacting a document control server identified from the distributed document; and

forcing use of a second document in place of the distributed document, with respect to at least one document action, based on information received from the document control server.

32.   The software product of claim 31, wherein the operations further comprise obtaining the second document based on the received information.

33.   The software product of claim 31, wherein the received information comprises the second document.

34.   The software product of claim 31, wherein the second document comprises a later version of the distributed document, and forcing use comprises transparently closing the distributed document and opening the second document.

35.   The software product of claim 34, wherein forcing use further comprises transparently overwriting the distributed document with the second document.

36.   The software product of claim 31, wherein the received information comprises document-permissions information specifying permissions relating the second document with the distributed document.

37.   The software product of claim 36, wherein the document-permissions information specifies access permissions at a level of granularity smaller than the distributed document.

38. The software product of claim 31, wherein the distributed document comprises a software program, the second document comprises a later version of the software program, and the at least one document action comprises running the software program.

39. A system comprising:

a client operable to send a request to a server when an action is to be taken with respect to a distributed electronic document local to the client; and

a server operable to receive the request, and in response to the client, the server being operable to identify information associated with the distributed electronic document, the associated information being retained at the server and indicating a second electronic document different from and associated with the distributed electronic document, the server being operable to relate information concerning the second electronic document to the client to facilitate the action to be taken.

40. The system of claim 39, wherein the server comprises:

a server core with configuration and logging components;

an internal services component that provides functionality across dynamically loaded methods; and

dynamically loaded external service providers, including one or more access control service providers.

41. The system of claim 39, further comprising:

a business logic tier comprising a cluster of document control servers, including the server;

an application tier including the client comprising a viewer client, a securing client, and an administration client; and

a load balancer that routes client requests to the document control servers.

42.   The system of claim 39, wherein the server comprises a permissions-broker server including a translation component, the local electronic document comprises a document secured previously by the permissions-broker server, and the translation component being operable to translate first document-permissions information in a first permissions-definition format into second document-permissions information in a second permissions-definition format in response to the request being received from the client.

43.   The system of claim 39, wherein the server comprises a permissions-broker server operable to obtain and send, in response to the request, a software program comprising instructions operable to cause one or more data processing apparatus to perform operations effecting an authentication procedure, and the client uses the authentication program to identify a current user and control the action with respect to the second document based on the current user and document-permissions information associated with the second document.

44.   The system of claim 39, wherein the server comprises a document control server operable to synchronize offline access information with the client in response to the client request, the offline access information comprising a first key associated with a group, the first key being useable at the client to access a third document by decrypting a second key in the third document, and the client allows access to the third document, when offline, by a user as a member of the group, using the first key to decrypt the second key in the third document and governing actions with respect to the third document based on document-permissions information associated with the third document.

45.   A system comprising:

client means for contacting a server when an action is to be taken with respect to a distributed electronic document retained locally; and

server means for identifying and relating information concerning a second electronic document different from and associated with the distributed electronic document that is to be operated on in place of the distributed electronic document with respect to the action.

46.   The system of claim 45, further comprising:

server means for mapping first document-permissions information in a first permissions-definition format to second document-permissions information in a second permissions-definition format, the first document-permissions information being associated with an electronic document; and

client means for controlling actions with respect to the electronic document based on the second document-permissions information;

wherein the first permissions-definition format includes at least one type of permission information that cannot be fully defined in the second permissions-definition format used by the client means.